



## Oils and Antioxidants in Beans

Until recently, the oils in common beans (black, kidney, pinto, and great northern) have been largely overlooked since they exist in much lower quantities than the oils in sunflower, soybean, corn, and other seeds. However, a group of researchers, including ISTC's B.K. Sharma, gave the common bean a chance. They discovered that the oils in these beans exhibited high oxidative stability due to large concentrations of linolenic acid, a class of fatty acids that includes omega-3's, and tocopherol, a class of antioxidants with vitamin E activity. The beans also displayed superior low temperature properties compared with soybean oil. While the oil yields from these beans were low (1.3 - 2.2 mass % of the original bean weight), they show promise for use as nutritional supplements and sources of natural antioxidants, which could be used to provide stability to edible oils, biodiesel, and biolubricants.



Their study, **Physical Properties and Fatty Acid Profiles of Oils from Black, Kidney, Great Northern, and Pinto Beans**, was published in a 2010 issue of the Journal of the American Oil Chemists' Society.

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**Oils and Antioxidants in Beans**

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- B.K. Sharma
- Kishore Rajagopalan

## Publications

Physical Properties and Fatty Acid Profiles of Oils from Black, Kidney, Great Northern, and Pinto Beans



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